

Please amend the claims as follows (this listing of claims replaces all prior listings):

1. (Currently amended) A method comprising:  
scheduling processing of data received at a plurality of ports, the processing performed by a plurality of processing threads that execute in parallel, including  
determining that a first segment of data is available from one of the plurality of ports ~~needs service~~,  
selecting one of the plurality of processing threads that is available to process the first segment of data ~~service the port~~,  
assigning the port to the selected processing thread,  
processing the first segment of data using the assigned processing thread,  
determining that ~~data is~~ a second segment of data is available from the assigned  
port, and  
awaiting notification by the processing thread that processing of the first segment of data ~~received at the assigned port~~ has been completed prior to unblocking the port and re-assigning the port to one of the plurality of ~~processes~~ processing threads.
2. (Cancelled)
3. (Previously presented) The method of claim 20, wherein the selecting is performed by the scheduling thread.
4. (Currently amended) The method of ~~claim 3~~ claim 1, further comprising:  
directing transfer of the data from the assigned port to the one of the plurality of processes for processing.
5. (Previously presented) The method of claim 1, wherein selecting comprises:

determining if any of the plurality of processes is available to process the data; and  
if it is determined that one of the plurality of processes is available to process the data,  
choosing an available one of the plurality of processes.

6. (Previously presented) The method of claim 1, further comprising:  
recording the port-to-process assignment on an assignment list.
7. (Previously presented) The method of claim 6, further comprising:  
removing the port-to-process assignment from the assignment list upon receiving  
notification that the processing has been completed.
8. (Original) The method of claim 1, wherein the data comprises packet data.
9. (Original) The method of claim 8, wherein the packet data comprises a network  
packet.
10. (Original) The method of claim 9, wherein the packet data comprises a  
predetermined portion of a network packet.
11. (Original) The method of claim 9, wherein the network packet comprises an  
Ethernet packet.
12. (Original) The method of claim 1, wherein the one of the plurality of ports  
comprises a 10/100 BaseT Ethernet port.
13. (Currently amended) A machine-accessible medium, which when accessed  
results in a machine performing operations comprising:

scheduling processing of data received at a plurality of ports by a plurality of processing threads that execute in parallel, including

determining that a first segment of data is available from one of the plurality of ports ~~needs service,~~

selecting one of the plurality of processing threads that is available to process the first segment of data ~~service the port,~~

assigning the port to the selected processing thread,

processing the first segment of data using the assigned processing thread,

determining that a second segment of data is available from the assigned port, and

awaiting notification by the processing thread that processing of the first segment of data ~~received at the assigned port~~ has been completed prior to unblocking the port and re-assigning the port to one of the plurality of processing threads ~~processes~~.

14. (Cancelled)

15. (Previously presented) The machine-accessible medium of claim 13, which when accessed, results in the machine performing operations comprising:

using a scheduling thread to schedule the processing of data, the scheduling thread executing in parallel with the processing threads.

16. (Previously presented) The machine-accessible medium of claim 15, wherein selecting one of the plurality of processing threads that is available to service the port comprises determining if any of the plurality of processes is available to process the data; and choosing an available one of the plurality of processes if it is determined that one of the plurality of processes is available to process the data.

17. (Previously presented) The machine-accessible medium of claim 13, which when accessed results in the machine performing operations comprising recording the port-to-process assignment on an assignment list.

18. (Previously presented) The machine-accessible medium of claim 17, which when accessed results in the machine performing operations comprising removing the port-to-process assignment from the assignment list upon receiving notification that the processing has been completed.

19. (Cancelled)

20. (Previously presented) The method of claim 1, wherein the scheduling is performed by a scheduling thread that executes in parallel to the processing threads.

21. (New) The method of claim 20, in which the scheduling thread comprises a hardware controlled thread.

22. (New) The method of claim 1, wherein the first and second segments of data are portions of a single network packet, and the first and second segments of data are processed by different processing threads.

23. (New) The method of claim 1, wherein selecting a processing thread that is available to process the first segment of data comprises polling registers to determine which processing threads have completed processing of data.

24. (New) The method of claim 1, wherein the number of processing threads is larger than the number of ports.

25. (New) The method of claim 1, wherein the processing threads comprise multiple hardware controlled threads executing in parallel.

26. (New) A method comprising:  
scheduling processing of network packet data received at a plurality of ports, the processing performed by a plurality of processing threads that execute in parallel, comprising:  
using a scheduling thread that executes in parallel to the processing threads to select a processing thread that is available to process a first segment of data received at one of the plurality of ports,  
assigning the port to the selected processing thread,  
recording the port-to-process assignment on an assignment list,  
determining that a second segment of data is available from the port, and  
awaiting notification by the processing thread that processing of the first segment of data has been completed prior to unblocking the port, removing the port-to-process assignment from the assignment list, and re-assigning the port to one of the plurality of processing threads.

27. (New) The method of claim 26, wherein the scheduling thread schedules the processing of network packet data so that segments of the network packet data received at a particular port are processed serially in a sequence that the segments are received at the port.

28. (New) The method of claim 26, wherein the scheduling thread and the processing threads comprise multiple hardware controlled threads executing in parallel.